REMARKS

In the Office Action dated November 5, 2004, claims 1-31 were presented for examination. Claims 1-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Jippo*, U.S. Patent No. 5,432,915, in view of *Jackson et al.*, U.S. Patent No. 6,473,819.

The following remarks are provided in support of the pending claims and responsive to the Office Action of November 5, 2004 for the pending application.

The comments presented in the response to the First Office Action with respect to *Jippo*, and the comments presented in the response to the Second Office Action with respect to *Jackson et al.*, are hereby incorporated by reference.

As noted in Third Office Action, the Examiner uses the *Jippo* reference to support the following three elements as claimed by Applicant: organizing at least some of the processors into a hierarchy, providing a lock selected from the group consisting of: a lock, and a lock which waits using only local memory, and processing the lock responsive to the hierarchy. This same assertion was provided by the Examiner in the First Office Action, and responded to by Applicant in the Response to the First Office Action. In responding to Applicant, the Examiner did not address the arguments set forth by Applicant, rather, the Examiner set forth a new rejection with a different reference and was silent as to Applicant's remarks.

As noted in the Response to the First Office Action, the patent of *Jippo* organizes their processors into first and second groups, not into a hierarchy. In each of Applicant's independent claims, Applicant's processors are organized into a hierarchy. There is no teaching in *Jippo* for organizing any of the processors into a hierarchy or for processing a lock responsive to the hierarchy. The locks of *Jippo* are processed on a first come first serve basis. The locks of *Jippo* are not responsive to a hierarchy of processors, as the injection of such a hierarchical system into *Jippo* would in fact contradict *Jippo*'s very own stated system of assigning locks on a first come

2

first serve basis. "To establish a prima facie case of obviousness . . . the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." MPEP §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). *Jippo* not only does not teach the hierarchical organization of the processors or processing the lock responsive to the hierarchy, but such a teaching would contradict *Jippo*'s lock assignment schema of assigning locks on a first come first serve basis. Accordingly, *Jippo* could not teach or suggest the making of Applicant's claimed elements or provide a reasonable expectation of success.

In order to apply *Jippo* to Applicant's pending application, *Jippo* must be modified and reconfigured to place their processors into a hierarchy and to support communication of lock among the processors responsive to Applicant's hierarchy. However, this goes against the teaching of *Jippo*. "Although a prior art device 'may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.'" MPEP §2143.01 (citing *In re Mills*, 916 F.2d 680, 682, 16 USPQ 2d. 1430 (Fed. Cir. 1990)). *Jippo* does not teach or suggest organizing groupings of processors into a hierarchy and processing a lock responsive to the hierarchy. To read *Jippo* as providing or supporting the hierarchy would require a modification to the invention of *Jippo* not envisioned or required in the system of *Jippo*. The only suggestion for organizing processors into a hierarchy and for processing a lock responsive to the hierarchy is derived from Applicant's invention. Absent Applicant's invention, there is no suggestion or motivation within *Jippo* for such a modification. "It is impermissible to use the claimed invention as an instructions manual or 'template' to piece togther the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ 2d 1780 (Fed. Cir. 1992) (citing *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991)). Yet this is the very process that the Examiner has attempted to undertake. Although Applicant's invention may appear to combine elements found in *Jippo*, "the inquiry under [35 U.S.C.] §103 is whether prior use makes the picture of the jigsaw puzzle, rather than its pieces obvious." *Kori Corp. v. Wilco Marsh Buggies & Draglines*, 708 F.2d 151,

3

155 (5ᵗʰ Cir. 1983). The entirety of Applicant's invention is greater than the sum of the parts that comprise the novelty of the invention. "[T]he linchpin is not whether the individual components of the patent were obvious at the time of the invention, but whether the aggregation produced a new or different result or achieved a synergistic effect." *Id.* (citing *Continental Oil co. v. Cole*, 634 F.2d 188, 197 (5ᵗʰ Cir. 1981)). Unlike *Jippo*, Applicant's processors are organized into a hierarchy which is then utilized to process a lock request in a high contention system. Accordingly, Applicant respectfully contends that the teachings of *Jippo* does not teach the element of the hierarchical organization of the processors and processing a lock request based upon this hierarchy, as required

As noted in the Third Office Action, the Examiner uses the *Jackson et al.* reference to support the element of the lock being an interruptible lock as claimed by Applicant. However, in the Second Office Action, the Examiner used *Jackson et al.* to support each of the elements in Applicant's claims. In responding to Applicant, the Examiner did not address the arguments set forth by Applicant in the Response to the Second Office Action, rather, the Examiner set forth a new rejection, *i.e.* the Third Office Action. However, in the Third Office Action, the Examiner does not assert that *Jackson et al.* organizes the processors into a hierarchy, nor that *Jackson et al.* processes a lock responsive to the hierarchy. Rather, the Examiner uses *Jackson et al.* merely to support use of an interruptible lock. However, there is no support in *Jackson et al.* for processing their interruptible lock in response to a hierarchical grouping of processors. In fact, as noted by Applicant in the Response to the Second Office Action, there is no teaching in *Jackson et al.* for organizing any of the processors into a hierarchy or for giving one processor priority access to a lock over other processors based on an assigned hierarchy. It is accepted that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP §2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). Even in view of *Jackson et al.*, there still remains no teaching, suggestion, or motivation in *Jackson et al.* for organizing the processors into a hierarchy. Neither *Jippo* nor *Jackson et al.* teach or suggest organizing the processors into a hierarchy and for processing the lock responsive to the hierarchy, as is suggested by the Examiner. Even with the application of
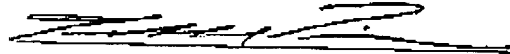
4

Jackson et al., the Examiner continues to omit any teaching towards the hierarchical organization of processors, as well as processing a lock responsive to this hierarchical organization. However, Applicant's claimed invention requires the hierarchical organization of the processors. It is the organization of the processors and the processing of the lock with respect to this organization that reduces average overhead of passing a lock to a requesting processor in a high contention system. The elements that both *Jackson et al.* and *Jippo* fail to address are critical to the advantages found in Applicant's invention. Both *Jackson et al.* and *Jippo* fail to teach all of the claim limitations and fail to establish the prima facie obviousness of the claimed invention anywhere in the specification and associated drawing figures. Accordingly, the Applicant respectfully submits that claims 1-31 would not have been obvious in view of *Jippo* ('915) in view of *Jackson et al.* ('819) and allowance of claims 1-31 is respectfully requested.

As the CAFC has made clear, the prior art must teach the desirability of the modification in question. "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon et al.,* 733 F.2d 900, 221 USPQ 1125, 1127 (Fed. Cir. 1984). It is axiomatic that the subject matter of the claims may not be considered obvious as a result of a hypothetical modification of a reference unless something in the reference suggests that an advantage may be derived from the modification. In this respect, the CAFC appears to speak directly to the issue of the need to determine the scope and contents of the prior art. There is no suggestion or motivation to provide the hierarchical organization of processors in either *Jippo* or *Jackson et al.* to enable a lock to be processed in response to the hierarchy, and thereby reduce associated overhead, as is suggested by the Examiner. The desirability of the modification can be found at best only through the use of Applicant's invention. Therefore, the prior art reference does not render Applicant's invention obvious as there is no teaching, suggestion, or motivation to apply elements found in *Jippo* or *Jackson et al.* to build the product of Applicant. Accordingly, Applicant respectfully contends that the combination of *Jippo* and *Jackson et al.* does not meet the standard set by the CAFC's interpretation of 35 U.S.C. §103(a), and respectfully requests the Examiner to allow claims 1-31.

5

For the reasons outlined above, withdrawal of the rejection of record and an allowance of this application are respectfully requested.

Respectfully submitted,

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6